

Claims

1. A back light assembly for applying light to a liquid crystal display panel, comprising:

5 a receiving container having a receiving space;

a lamp disposed in the receiving space, for generating the light;

a glass substrate interposed between the liquid crystal display panel and the lamp;

a diffuser for diffusing the light generated by the lamp so as to make uniform

10 a luminance distribution of the liquid crystal display panel.

2. The back light assembly of claim 1, wherein the diffuser is a first diffusion sheet disposed on a first face of the glass substrate, the first face facing the liquid crystal display panel.

15

3. The back light assembly of claim 2, wherein the first diffusion sheet comprises a first diffusion sheet body having an upper face and a lower face, and a light diffusion bead disposed on the upper face and the lower face.

20

4. The back light assembly of claim 1, wherein a bottom face of the receiving container includes a substrate-supporting member for supporting the glass substrate.

25

5. The back light assembly of claim 1, wherein the glass substrate comprises a first glass plate, a second glass plate and a second diffusion sheet interposed between the first glass plate and the second glass plate.

6. The back light assembly of claim 5, wherein the second diffusion sheet comprises a second diffusion body and a light diffusion bead disposed on both faces of the second diffusion body.

5 7. The back light assembly of claim 1, wherein the diffuser comprises a binder and a light diffusion bead mixed with the binder, the binder being disposed on a first face of the glass substrate, the first face facing the lamp.

10 8. The back light assembly of claim 1, wherein the diffuser comprises a binder and a light diffusion bead mixed with the binder, the binder being disposed on a second face of the glass substrate, the second face facing the liquid crystal display panel.

15 9. The back light assembly of claim 1, wherein the diffuser is an embossing pattern formed on a first face of the glass substrate, the first face facing the lamp.

20 10. The back light assembly of claim 1, wherein the diffuser is an embossing pattern formed on a second face of the glass substrate, the second face facing the liquid crystal display panel.

11. The back light assembly of claim 1, wherein the diffuser has a Haze value higher than about 90%.

25 12. The back light assembly of claim 1, wherein the glass substrate comprises two glass plates, and the diffuser is an embossing pattern formed on at least one face of the two glass plates, the face being disposed between the two glass

plates.

13. The back light assembly of claim 1, wherein the glass substrate comprises a first glass plate, a second glass plate, a bead and a binder; the bead
5 being mixed with the binder and interposed between the first glass plate and the second glass plate.

14. A liquid crystal display device comprising:
a receiving container including a bottom face and a sidewall, the bottom face
10 and the sidewall forming a receiving space;
a lamp disposed on the bottom face, for generating a first light;
a glass substrate disposed in the receiving space, the first light advancing toward the glass substrate;
a diffusion plate including a diffuser for diffusing the first light to transform a
15 second light having a more uniform luminance than the first light; and
a liquid crystal display panel assembly for displaying an image by using the second light.

15. The liquid crystal display device of claim 14, wherein the diffuser is
20 an embossing pattern formed on a first face of the glass substrate, the first face facing the lamp.

16. The liquid crystal display device of claim 14, wherein the diffuser is an embossing pattern formed on a second face of the glass substrate, the second face
25 facing the liquid crystal display panel.

17. The liquid crystal display device of claim 14, wherein the diffuser is a

diffusion sheet disposed on a second face of the glass substrate, the second face facing the liquid crystal display panel.

18. The liquid crystal display device of claim 17, wherein the diffusion
5 sheet comprises a diffusion sheet body and a light diffusion bead for diffusing the first light, the light diffusion bead being mixed with a binder and disposed on both face of the diffusion sheet body.

19. The liquid crystal display device of claim 14, wherein the glass
10 substrate comprises a first glass plate, a second glass plate, a bead and a binder; the bead being mixed with the binder and interposed between the first glass plate and the second glass plate.

20. The liquid crystal display device of claim 14, wherein the glass
15 substrate comprises two glass plates, and the diffuser is an embossing pattern formed on at least one face of the two glass plates, the face being disposed between the two glass plates.